

What Is Claimed Is:

1. A method for improving selectivity in liquid phase chemical reactions by flowing a reaction solution through a solution reaction column packed with particles having a multiplicity of nanometer-order pores, which comprises flowing the chemical reaction solution containing molecules to be reacted through mesopores having diameter on the order of several nanometers and length on the order of several ten nanometers, while simultaneously activating the reaction thereof with reaction-initiating/accelerating means.

2. The method for improving selectivity in liquid phase chemical reactions according to claim 1, wherein the reaction is activated through irradiation with laser light.

3. A solution flow reaction system for use in the method according to claim 1 or 2, comprising:

a reaction column packed with particles having a multiplicity of nanometer-order pores;

a pressure pump for flowing reaction solution;

a solution reservoir(s) for one or more reaction solutions;

a mixing chamber for mixing the reaction solutions;

a solution reservoir for accommodating reaction product after the reaction thereof;

a tube system connecting these; and
reaction-initiating/accelerating means;

wherein the reaction solution containing molecules
to be reacted is fed from a solution reservoir to the
mixing chamber, pumped into the reaction column under
pressure by means of the pump, while simultaneously
subjected to activating of the reaction thereof with the
reaction-initiating/accelerating means, and then thus
reacted reaction product is fed into the solution
reservoir.

4. The reaction system according to claim 3,
wherein the reaction-initiating/accelerating means
is laser light irradiating means.